

<b>Form 1449</b> (modified)  <b>Information Disclosure Statement By Applicant</b>  (Use Several Sheets if Necessary)	Docket: 091/005P Title: Genetically Altered Human Pluripotent Stem Cells Inventors: Gold, Joseph D., et al. Filing Date: 4 May 2001	U.S.S.N. 09/849,022 Group: 1632/1645
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**U.S. Patent Documents**

Examiner Initial	Ref.	Patent No.	Filing Date	Issue Date	Class/ Subclass	Inventors:	Title:
TNT	A	5,104,795	2/14/90	4/14/92	435/69.1	Lee, J-H., et al.	Shortened Phosphoglycerate Kinase Promoter
	B	5,166,065	3/31/90	11/24/92	435/240.1	Williams, R., et al.	In Vitro Propagation of Embryonic Stem Cells
	C	5,234,809	7/1/91	8/10/93	435/91	Boom, W., et al.	Process for isolating nucleic acid
	D	5,332,672	4/9/92	7/26/94	435/240.2	Conover, J., et al.	Prevention of ES Cell Differentiation by Ciliary Neurotrophic Factor
	E	5,405,772	6/18/93	4/11/95	435/240.31	Ponting, I.,	Medium For Long-Term Proliferation and Development of Cells
	F	5,453,357	10/8/92	9/26/95	435/7.21	Hogan, B.	Pluripotent embryonic stem cells and methods of making same
	G	5,523,226	5/14/93	6/4/96	435/240.2	Wheeler, M.	Transgenic Swine Compositions and Methods
	H	5,583,016	10/27/94	12/10/96	435/91.3	Villeponteau B, et al.	Mammalian Telomerase
	I	5,639,618	5/13/94	6/17/97	435/7.21	Gay, D.	Method of Isolating a Lineage Specific Stem Cell In Vitro
	J	5,643,761	10/27/93	7/1/97	435/91.1	Fisher, P., et al.	Method for Generating A Subtracted CDNA Library and Uses of the Generated Library
	K	5,672,499	6/7/95	9/30/97	435/240.4	Anderson, D., et al.	Immortalized Neural Crest Stem Cells and Methods of Making
	L	5,789,158	5/18/95	8/4/98	435/6	Knowles, B., et al.	Developmental Embryonic Mouse CDNA Libraries
	M	5,840,484	1/27/94	11/24/98	435/6	Seilhamer, J., et al.	Comparative Gene Transcript Analysis
	N	5,843,780	1/18/96	12/1/98	435/363	Thomson, J.	Primate embryonic stem cells
	O	5,856,136	7/3/96	1/5/99	435/69.3	Au-Young, J.	Human Stem Cell Antigens
	P	5,914,268	11/21/94	6/22/99	435/325	Keller, G., et al.	Embryonic Cell Populations and Methods to Isolate Such Populations
	Q	5,922,597	7/14/97	7/13/99	435/372.1	Verfaillie, C., et al.	Ex Vivo Culture of Stem Cells
	R	5,942,435	6/6/95	8/24/99	435/325	Wheeler, M.	Transgenic Swine Compositions and Methods
	S	5,968,829	9/5/97	10/19/99	435/467	Carpenter, M.	Human CNS Neural Stem Cells
	T	5,981,165	6/7/95	11/9/99	435/4	Weiss, S., et al.	In Vitro Induction of Dopaminergic Cells
	U	6,040,180	5/7/97	3/21/00	435/377	Johe, K.	In Vitro Generation of Differentiated Neurons From Cultures of Mammalian Multipotential CNS Stem Cells
TNT	V	6,261,556	Oct 18/99	Jul 17/01	424/94.5	Weinrich SL et al.	Purified Telomerase

Examiner <i>Wen</i>	Date Considered <i>7/24/03</i>

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**Foreign Patent Published For Foreign Patent Application**

Examiner Initial	Ref.	Document No.	Publ. Date	Jurisdiction	Title:	Translation	
TNT	W	WO 94/07997	4/14/94	PCT	Long-term Proliferation of Primordial Germ Cells		
	X	WO 96/17627	6/13/96	PCT	System for the Maintenance, Growth and Differentiation of Human and Non-Human Primate Pluripotent Stem, Progenitor and Mature Bone Marrow Cells		
	Y	WO 97/21802	6/19/97	PCT	Novel Embryonic Cell Populations and Methods to Isolate Such Populations		
	Z	WO 97/28253	8/7/97	PCT	Method for Culturing Cells Having Angiogenic Potential	Abstract	X
	AA	WO 97/30151	8/21/97	PCT	Cytokine Expressed by Dia/Lif-Deficient Embryonic Stem Cells for the Inhibition of Differentiation		
	AB	WO 97/47734	12/18/97	PCT	In Vitro Derivation and Culture of Primate Pluripotent Stem Cells and Therapeutic Uses Thereof		
	AC	WO 98/00540	1/8/98	PCT	Human Stem Cell Antigens, DNA Coding Therefor and Their Use		
	AD	WO 98/30679	7/16/98	PCT	Embryonic Stem Cell Serum Replacement		
	AE	WO 98/43679	10/8/98	PCT	Human Embryonic Germ Cell Line and Methods of Use		
	AF	WO 99/01552	1/14/99	PCT	Fluorescent Proteins as Cell-Type Specific Reporter	Abstract	X
	AG	WO 99/10535	3/4/99	PCT	A Process to Study Changes in Gene Expression in Stem Cells		
	AH	WO 99/20741	4/29/99	PCT	Methods and Materials for the Growth of Primate-Derived Primordial Stem Cells		
	AI	WO 99/42122	8/26/99	PCT	Method of Promoting Embryonic Stem Cell Proliferation		
	AJ	WO 99/43785	9/2/99	PCT	Derivation of Cells and Tissues from Embryonic Pre-Stem Cells for Transplantation Therapies		
	AK	EP 0695 351 B1	12/8/99	EP	Isolation, Selection and Propagation of Animal Transgenic Stem Cells		
✓ TNT	AL	FR 2744133	8/1/97	FR	Procedure for Culturing Cells with Morphogenic Potential for Inducing Morphogenesis of the Aforesaid Cells, Models in Vitro of Vascular Morphogenesis thus Obtained, and their Modification for Drug Screening Derwent Summary of WO 97/28253 and FR 2744133	Summary	X

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**Other Documents**

Examiner Initial	Ref.	Author, Title, Date, Source
TNT	AM	Amit, M., et al., "Clonally Derived Human Embryonic Stem Cell Lines Maintain Pluripotency and Proliferative Potential for Prolonged Periods of Culture," Dev. Biology, 227:000-000 (2000)
TNT	AN	Andrews, P., "Retinoic Acid Induces Neuronal Differentiation of a Cloned Human Embryonal Carcinoma Cell Line in Vitro," Dev. Biol., 103:285 (1984)
TNT	AO	Baribault, H., et al., "Embryonic Stem Cell Culture and Gene Targeting in Transgenic Mice," Mol. Biol. Med. 6:481 (1989)

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**Form 1449** (modified)

**Information Disclosed  
Statement By Applicant**

(Us Several Sheets if Necessary)

Docket: 091/005P U.S.S.N. 09/849,022

Title: Genetically Altered Human Pluripotent Stem Cells  
Inventors: Gold, Joseph D., et al.

Filing Date: 4 May 2001 Group: 1632  
1645

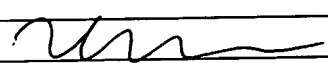
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Examiner Initial	Ref.	Author, Title, Date, Source
TNT	AP	Becton Dickinson, "Product Specification Sheet : Matrigel Basement Membrane Matrix, Phenol-Red Free"
TNT	AQ	Berger, C., et al., "Self Renewal of Embryonic Stem Cells in the Absence of Feeder Cells and Exogenous Leukaemia Inhibitory Factor," Growth Factors, 14:145 (1997)
TNT	AR	Bodnar, A., et al., "Extension of Life-Span by Introduction of Telomerase into Normal Human Cells," Science, 279:349 (1998)
TNT	AS	Bongso, A., et al., "Improved Quality of Human Embryos When Co-Cultured with Human Ampullary Cells," Hum. Reprod., 4:706 (1989)
TNT	AT	Bradley, A., et al., "Modifying the Mouse: Design and Desire," Biotechnology, 10:534 (1992)
TNT	AU	Brook, F., et al., "The Origin and Efficient Derivation of Embryonic Stem Cells in the Mouse," Proc. Natl. Acad. Sci., 94:5709 (1997)
TNT	AV	Carnegie, J., "Immunolocalization of Fibronectin and Laminin Within Rat Blastocysts Cultured Under Serum-Free Conditions," J. Reprod. Fert., 91:423 (1991)
TNT	AW	Caminci, P., et al., "High-Efficiency Full-Length cDNA Cloning," Methods Enzymol., 303:19 (1999)
TNT	AX	Clontech Laboratories, SMART cDNA Library Construction Kit, Catalog #K1051-1
TNT	AY	Corrick, C., et al., "Construction of a Mouse Blastocyst cDNA Library by PCR Amplification From Total RNA," Molecular Reproduction and Development, 43:7 (1996)
TNT	AZ	Deleersnijder, W., et al., "Isolation of markers for chondro-osteogenic differentiation using cDNA library subtraction. Molecular cloning and characterization of a gene belonging to a novel multigene family of integral membrane proteins", J Biol Chem, 271:19475 (1996)
TNT	BA	Eisen, M., "Cluster Analysis and Display of Genome-wide Expression Patterns," Proc. Natl. Acad. Sci., 95:14868 (1998)
TNT	BB	Elges, R., et al., "Establishment of Human Embryonic Stem Cell-Transfected Clones Carrying a Marker for Undifferentiated Cells," Curr Biol, 11:514 (2001)
TNT	BC	Evans, M., et al., "Establishment in Culture of Pluripotential Cell from Mouse Embryos," Nature, 292:154 (1981)
TNT	BD	Fenderson, B., et al., "Carbohydrate Antigens of Embryonal Carcinoma Cells: Changes Upon Differentiation," APMIS Suppl. 27, 100:109 (1992)
TNT	BE	Finley, M., et al., "Synapse Formation and Establishment of Neuronal Polarity by P19 Embryonic Carcinoma Cells and Embryonic Stem Cells," J. Neuroscience, 16:1056 (1996)
TNT	BF	Gardner, D., et al., "Culture and Transfer of Human Blastocysts Increases Implantation Rates and Reduces the Need for Multiple Embryo Transfers," Fertil. Steril, 69:84 (1998)
TNT	BG	Gendall, A., et al., "Isolation and Characterization of a Leukemia Inhibitory Factor-Independent Embryonic Stem Cell Line," Int. J. Biochem Cell Biol., 29:829 (1997)
TNT	BH	Gendron, R., et al., "Induction of Embryonic Vasculogenesis by bFGF and LIF in Vitro and in Vivo," Developmental Biology, 177:332 (1996)
TNT	BI	GibcoBrl Life Technologies Catalogue and Ref. Guide, pages 1-2 through 1-4, 1-94 and 1-95 (1993)
TNT	BJ	Itoh, M., et al., "Automated Filtration-Based High-Throughput Plasmid Preparation System," Genome Res., 9:463 (1999)
TNT	BK	Itskovitz-Eldor, J., et al., "Differentiation of Human Embryonic Stem Cells into Embryoid Bodies Comprising the Three Embryonic Germ Layers," Mol. Med., 6:88 (2000)
TNT	BL	Keller, G., "In Vitro Differentiation of Embryonic Stem Cells," Cell Biology, 7:862 (1995)

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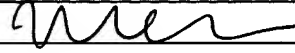
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<b>Information Disclosure Statement By Applicant</b>	Title: Genetically Altered Human Pluripotent Stem Cells	
(Use Several Sheets if Necessary)	Inventors: Gold, Joseph D., et al.	Group: 1645
	Filing Date: 4 May 2001	

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TNT	BM	Kelly, DL., et al., "DNA Microarray Analyses of Genes Regulated During the Differentiation of Embryonic Stem Cells," Mol Reprod. Dev., 56:113 (2000)
	BN	Ko, M., et al., "Large-scale cDNA analysis Reveals Phased Gene Expression Patterns During Preimplantation Mouse Development," Development, 127:1737 (2000)
	BO	Koshimizu, U., et al., "Functional Requirement of gp130-mediated Signaling for Growth and Survival of Mouse Primordial Germ Cells In Vitro and Derivation of Embryonic Germ (EG) Cells," Development, 122:1235 (1996)
	BP	Koshimizu, U., et al., "Rapid Communication Retinoic Acid Is a Potent Growth Activator of Mouse Primordial Germ Cells in Vitro," Developmental Biology, 168:683 (1995)
	BQ	Life Technologies, Inc., "SuperScript II; Rnase H Reverse Transcriptase," Product Brochure; pages 1-4
	BR	Matsuda, T., et al., "STAT3 Activation is Sufficient to Maintain an Undifferentiated State of Mouse Embryonic Stem Cells," EMBO J., 18:4261 (1999)
	BS	Matsui, Y., et al., "Derivation of Pluripotential Embryonic Stem Cells from Murine Primordial Germ Cells in Culture," Cell, 70:841 (1992)
	BT	Nichols, J., et al., "Establishment of Germ-line-Competent Embryonic Stem (ES) Cells Using Differentiation Inhibiting Activity," Development, 110:1341 (1990)
	BU	Nichols, J., et al., "Derivation of Germline Competent Embryonic Stem Cells with a Combination of Interleukin-6 and Soluble Interleukin-6 Receptor," Experimental Cell Research, 215:237 (1994)
	BV	O'Shea, K., "Embryonic Stem Cell Models of Development," New Anat., 257:32 (1999)
	BW	Pease, S., et al., "Isolation of Embryonic Stem (ES) Cells in Media Supplemented with Recombinant Leukemia Inhibitory Factor (LIF)," Developmental Biology, 141:344 (1990)
	BX	Pera, M., "Human Pluripotent Stem Cells: a Progress Report," Curr Opin Genet Dev, 11:595 (2001)
	BY	Pedersen, R., "Studies of In Vitro Differentiation with Embryonic Stem Cells," Reprod. Fertil. Dev., 6:543 (1994)
	BZ	Pedersen, R., "Embryonic Stem Cell for Medicine," Scientif. Am., 280:68 (1999)
	CA	Rathjen, J., et al., "Formation of a Primitive Ectoderm Like Cell Population, EPL Cells, from ES Cells in Response to Biologically Derived Factors," J. of Cell Sci., 112:601 (1999)
	CB	Rehman, N., et al., "Development of IVM-IVF Produced 8-Cell Bovine Embryos in Simple, Serum-Free Media After Conditioning or Co-Culture With Buffalo Rat Liver Cells," Mol. Repro. Dev, 38:251 (1994)
	CC	Reubinoff, B., et al., "Embryonic Stem Cell Lines From Human Blastocysts: Somatic Differentiation In Vitro," Nat. Biotechnology, 18:399 (2000)
	CD	Robertson, E., "Derivation and Maintenance of Embryonic Stem Cell Cultures," Methods in Mol. Bio., 75:173 (1997)
	CE	Rose, T., et al., "Oncostatin M (OSM) Inhibits the Differentiation of Pluripotent Embryonic Stem Cells In Vitro," Cytokine, 6:48 (1994)
	CF	Shamblott, M., et al., "Human Embryonic Germ Cell Derivatives Express a Broad Range of Developmentally Distinct Markers and Proliferate Extensively in Vitro," PNAS, 98: 118 (2001)
	CG	Shamblott, M., et al., "Derivation of Pluripotent Stem Cells from Cultured Human Primordial Germ Cells," Proc. Natl. Acad. Sci. USA, 95:13726 (1998)
	CH	Smith, A., et al., "Inhibition of Pluripotential Embryonic Stem Cell Differentiation by Purified Polypeptides," Nature, 336:668 (1998)
	CI	Smith, A., et al., "Buffalo Rat Liver Cells Produce a Diffusible Activity Which Inhibits the Differentiation of Murine Embryonal Carcinoma and Embryonic Stem Cells," Dev. Biol., 121:1 (1987)
TNT	CJ	Sigma, Product Information for Laminins for Cell Culture

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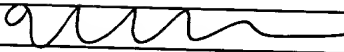
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TNT	CK	Takahashi, N., et al., "Toward a Whole cDNA Catalog: Construction of an Equalized cDNA library from Mouse Embryos," Genomics, 23:202 (1994)
	CL	Thomson, J., et al., "Embryonic Stem Cell Lines Derived from Human Blastocysts," Science, 282:145 (1998)
	CM	Thomson, J., et al., "Neural Differentiation of Rhesus Embryonic Stem Cells," APMIS, 106:149 (1998)
	CN	Thomson, J., et al., "Isolation of a Primate Embryonic Stem Cell Line," Proc. Natl. Acad. Sci. USA, 92:7844 (1995)
	CO	Thomson, J., et al., "Primate Embryonic Stem Cells," Current Topics in Developmental Biology, 38:133 (1998)
	CP	Vassilieva, S., et al., "Establishment of SSEA-1- and Oct-4-Expressing Rat Embryonic Stem-like Cell Lines and Effects of Cytokines of the IL-6 Family on Clonal Growth," Exper. Cell Research, 258:361 (2000)
	CQ	Worrall, D., et al., "A Carrot Leucine-Rich-Repeat Protein That Inhibits Ice Recrystallization," Science, 282:115 (1998)
	CR	Wenk, J., et al., "Glycolipids of Germ Cell Tumors: Extended Globo-Series Glycolipids are a Hallmark of Human Embryonal Carcinoma Cells," Int. J. Cancer, 58:108 (1994)
	CS	Williams, R., et al., "Myeloid Leukaemia Inhibitory Factor Maintains the Developmental Potential of Embryonic Stem Cells," Nature, 336:684 (1988)
	CT	Woltjen, K., et al., "Retro-recombination Screening of a Mouse Embryonic Stem Cell Genomic Library," Nucleic Acids Research, 28:e41 (2000)
	CU	Xiong, J., et al., "Large-Scale Screening for Developmental Genes in Embryonic Stem Cells and Embryoid Bodies Using Retroviral Entrapment Vectors," Dev. Dynamics, 212:181 (1998)
TNT	CV	Zandstra, P., et al., "Leukemia Inhibitory Factor (LIF) Concentration Modulates Embryonic Stem Cell Self-Renewal and Differentiation Independently of Proliferation," Biotechnol. Bioeng., 69:607 (2000)

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